

Abstract

Antennas with steerable antenna patterns and techniques for using such antennas are described. In accordance with the invention, antenna patterns with one or more NULLs are used. Through the use of digital control signals the antenna pattern is steered so that a source of signal interference, e.g., a multipath signal, will be located in a NULL. In this manner the received signal's S/N ratio can be maximized thereby facilitating demodulation. The techniques of the invention can be applied to television, computer devices, mobile devices and a wide range of other systems. Digital commands to control an antenna may include multiple information fields, e.g., a direction field, a channel field, a gain field and a polarity field. Antennas incapable of supporting the specified fields disregard information in fields which are not supported. Information in each supported field is decoded and used to adjust the corresponding antenna characteristic.